

Using Technology in the Classroom to Differentiate Learning



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Differentiated Instruction

*is a model of instruction that
revolves around the belief that
students learn in many different
ways.*

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Differentiation Elements

STUDENT TRAITS:

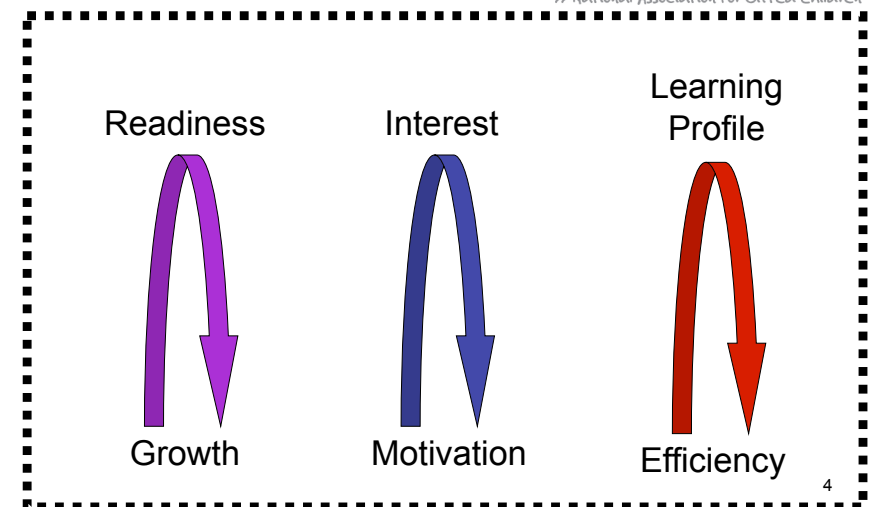
- **Readiness**
- **Interest**
- **Learning Profile**
- **Affect**

CLASSROOM ELEMENTS:

- **Content**
- **Process**
- **Product**
- **Learning Environment**

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What's the Point?



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When students enjoy tasks, they are intrinsically motivated to do well.

Both interests and personal relevance produce intrinsic value for a student. **Interest is one of the best predictors of achievement across a variety of domains.**

(Siegle, Rubenstein, Pollard, & Romey, 2010)

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A differentiated classroom provides multiple options for:

Content...taking in information

Process...making sense of information

Product...expressing what student understands

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Differentiated Instruction

- Providing materials and tasks at varied levels of difficulty with varying degrees of scaffolding, through multiple instructional groups.
- Encouraging student success by varying ways in which students work: alone or collaboratively, in auditory or visual modes, or through practical or creative means.

(Tomlinson, 2000) ⁷

High Quality Curriculum and Instruction

- ☐ fresh and surprising
- ☐ seems real (is real) to the student
- ☐ coherent (organized, unified, sensible) to the student
- ☐ **rich, deals with profound ideas (concept-based)**
- ☐ **stretches the student (rigorous)**
- ☐ calls on students to use what they learn in interesting and important ways
- ☐ involves the student in setting goals for their learning and assessing progress toward those goals



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High Quality Curriculum and Instruction

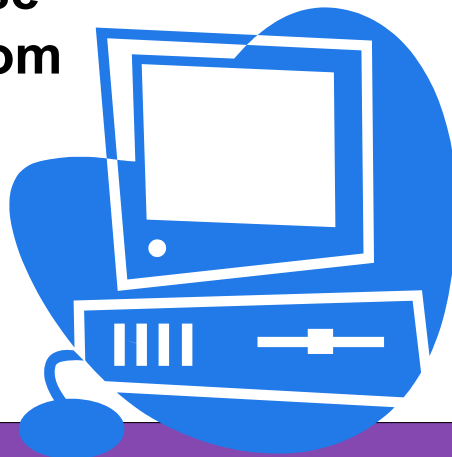
- ☐ clearly focused on essential understandings and skills of the discipline that a professional would value (authentic)
- ☐ **mentally and affectively engaging to the learner**
- ☐ joyful-or at least satisfying
- ☐ provides guided choices
- ☐ allows meaningful collaboration
- ☐ focuses on products that matter to students
- ☐ **connects with students' lives and world**



What do the features look like in practice?

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**Technology use
in the classroom
has
progressed
through 3
distinct
stages.**



11

**Automated
Print**



12

Automated Print Production Tool



13

Automated Print Production Tool Data driven virtual learning



14

**What
What**

do we change to meet student needs?

Technology presents

- (a) Extensive sources for access to more advanced **content**, as well as communication with experts in the disciplines;
- (b) Contexts for developing and applying the **processes** of critical and creative thinking skills; and
- (c) Tools for constructing and sharing sophisticated **products**.

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Technology can erase the student / teacher barrier and create communities of learners.

Technology empowers students to function as professionals.

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...our goal is to allow students to construct knowledge by providing them with opportunities to gather information, organize it in meaningful ways, and present it to others. In this way, the student is actively engaged with the technology and uses it as a productive tool.



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AudioBooks, E-Text
Research Skills
Literacy Tools
Math Tools
Science Resources
Social Studies Resources
Study Skills Tools
Graphic Organizers
Text-to-Speech



Using Technology in the Classroom
to Differentiate for Gifted Learners

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WOW!
Webinars on Wednesdays
National Association For Gifted Children

textHELP
BrowseAloud
http://www.browsealoud.com/page.asp?pg_id=80094

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About BrowseAloud BrowseAloud Features What's New Testimonials Accessibility Customer Comments Free Trial

Change text size A A A

Make this web site talk
get textHELP
BrowseAloud

New Release BrowseAloud... Making Websites Talk



BrowseAloud reads web pages aloud for people who find it difficult to read online. Reading large amounts of text on screen can be difficult for those with literacy and visual impairments.

More than 45 million people in the United States have literacy problems. By subscribing to BrowseAloud for your website, you will greatly increase the number of people who can access the content on your site.

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<http://www.livescribe.com/en-us/>

Record everything you hear, write and draw. Tap your notes to play back your recordings. Save and share interactive notes to your computer, iPad™ or iPhone™.

Tap it. Get it. *Gift It* >

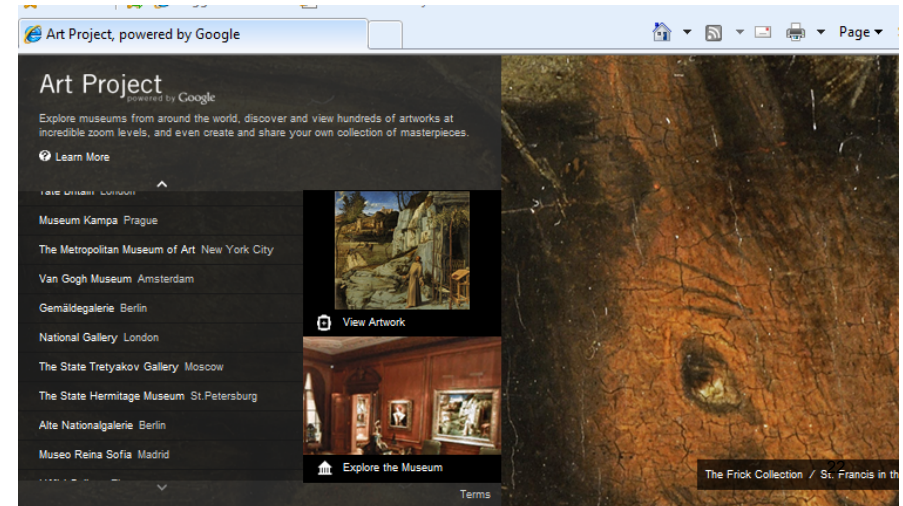


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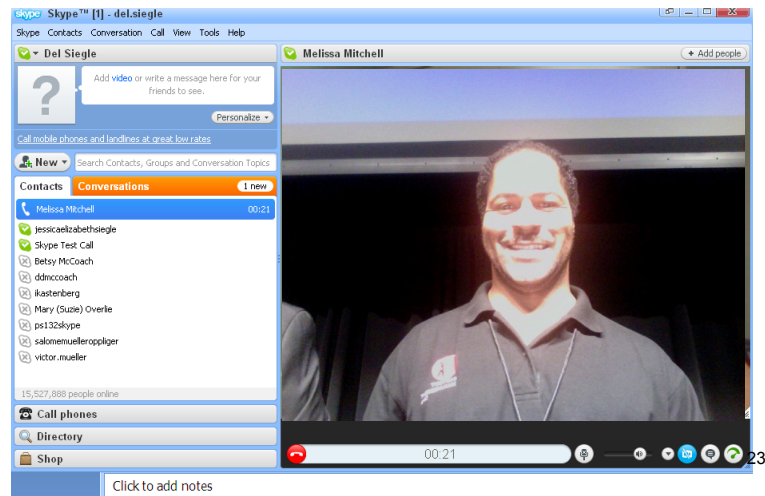
Bring the world into your classroom ...Google Earth is only the beginning...

WOW! Webinars on Wednesdays
National Association For Gifted Children

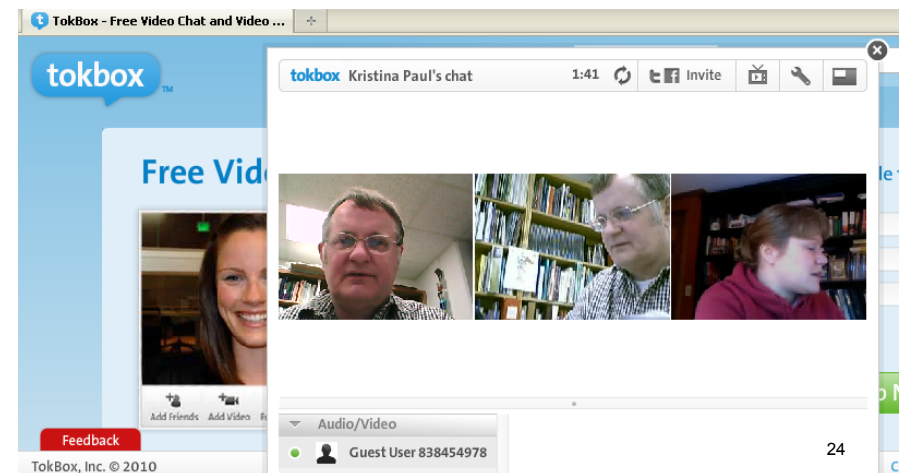
www.googleartproject.com



www.skype.com



www.tokbox.com



www.ustream.tv



25

Expand
student
product
options...



...paper and pencil aren't
the only game in town...

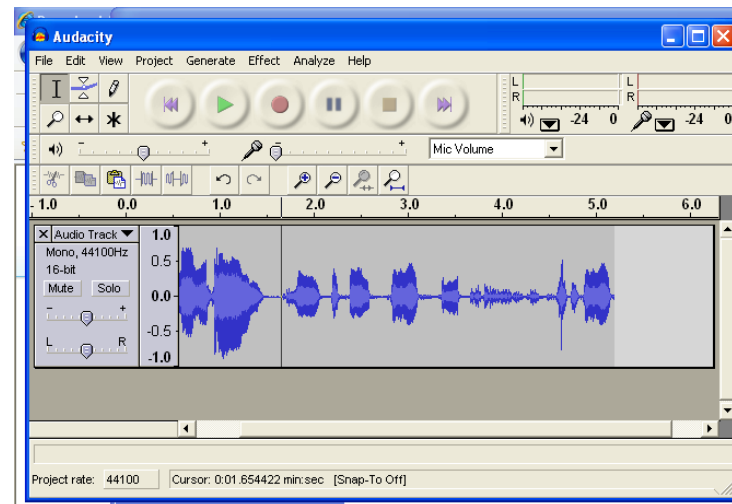
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<http://www.musicmasterworks.com>



27

<http://audacity.sourceforge.net/>

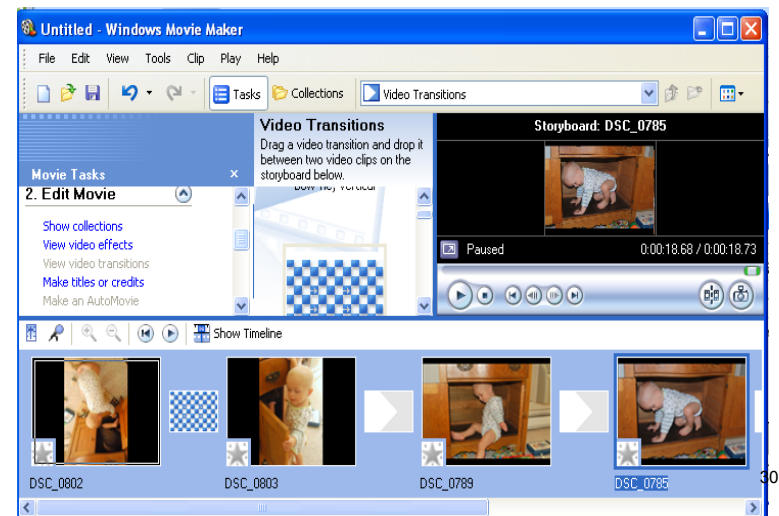


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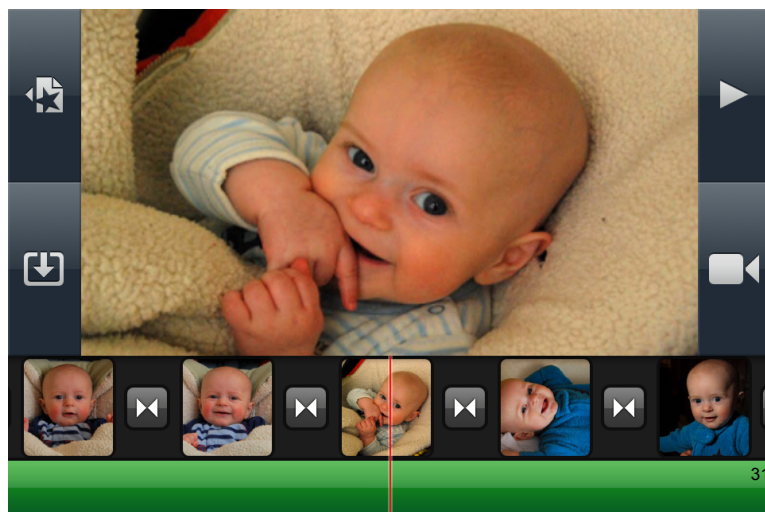
<http://www.pixlr.com>



Edit movies with Windows Movie Maker



Edit movies with Apple's itouch



<http://www.samanimation.com/>



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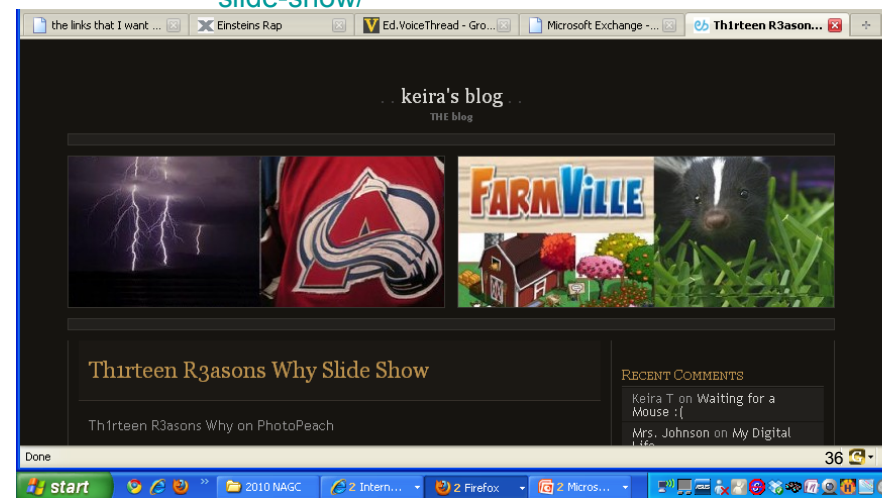
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http://animoto.com/play/n33GGqJBS0waB6S2hxbYJw?utm_content=challenger



35

<http://emskeira.edublogs.org/2010/04/27/th1rteen-r3asons-why-slide-show/>



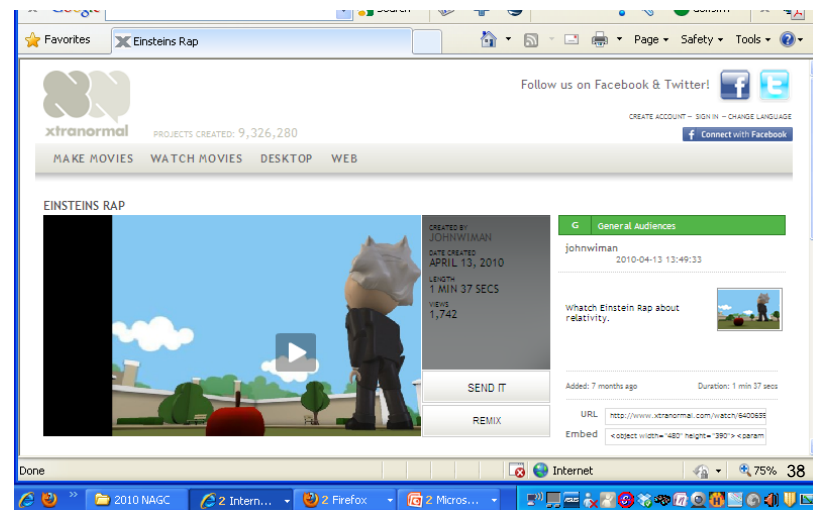
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<http://mesakids.ed.voicethread.com/?#q.b894105.i4764926>



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<http://www.xtranormal.com/watch/6400659/>



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ELECTRONIC BOOKS

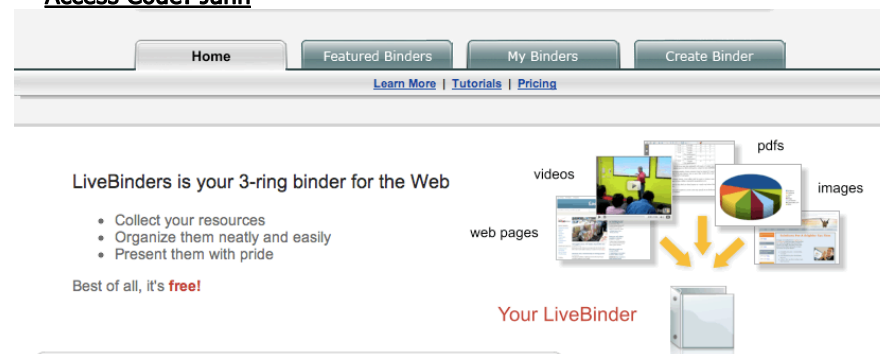


Variety of Titles
Synthesized Voices
Classic in the Public Domain
Limited Space Requirement
Highlighting and Notes
Dictionary
Searchable
Self-Publishing

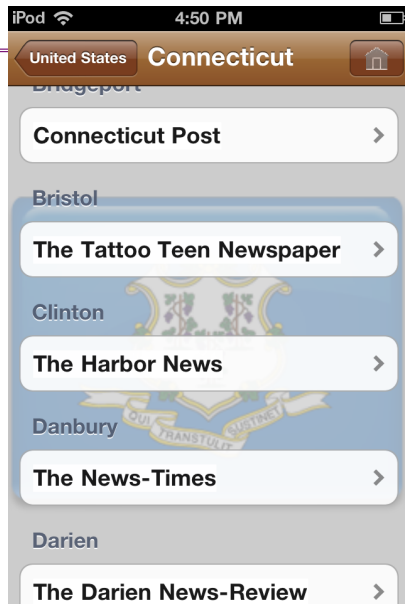
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http://livebinders.com/play/play_or_edit?id=41455
Access Code: Jann



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...lots of
nonprint
print...

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www.manybooks.net



MANYBOOKS.NET

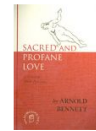
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SPOTLIGHT



NEW TITLES
RECOMMENDED

BOOKS OF THE WEEK



THE LAUGHING CAVALIER
THE STORY OF THE ANCESTOR OF THE SCARLET PIMPERNEL
BARONESS EMMUSKA ORCZY



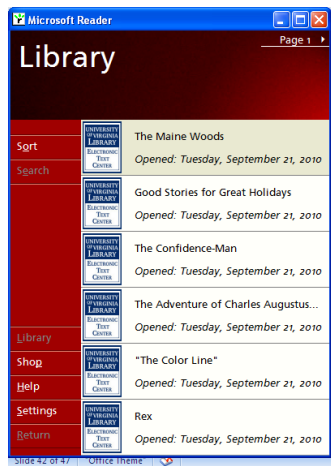
DOGLAND
WILL SHETTERLY
The Nix family has arrived. And Latchahie County will never be the same.
In an effort at improving his family's lot, the Nixes have moved to rural Florida to open Dogland: a combination zoo.

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Whoever loves a fight, first and last, will like

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<http://www.microsoft.com/reader/default.aspx>



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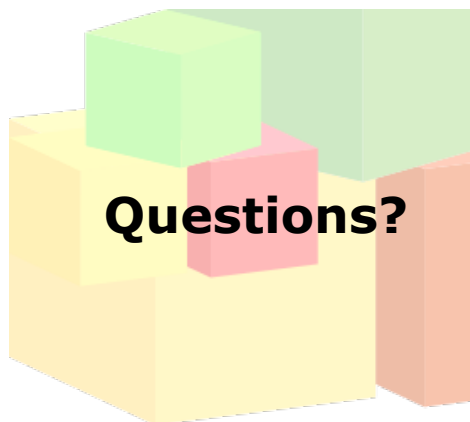
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***"Use digital tools to
help customers
solve problems for
themselves."***

45

In the 21st Century, using
technology to enhance student
learning is no longer optional...it
is essential for preparing
learned citizens.

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Other resources

List of sites to use for differentiation	http://www.tizmos.com/leppien
Learning Centers to Enhance Your Work in Differentiation	https://sites.google.com/site/differentiationlearningcenters/

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Visit the NAGC Website



www.nagc.org